

of inputs and a corresponding plurality of outputs, each of said plurality of polarization control optical switches comprising:

a polarization controller changing the polarization of the light incident thereon by one of applying voltage thereto and not applying voltage thereto; and

a switching element changing the optical path of the light from said polarization controller, wherein switching light from one of said plurality of inputs to one of said plurality of outputs requires controlling the switching element of only one of the plurality of polarization control optical switches.

33. (AS ONCE AMENDED) A polarization control optical space switch comprising: polarization control optical switches, each having a plurality of inputs and a plurality of outputs and connected together as a matrix defined by columns and rows, each of the polarization control optical switches comprising:

a polarization controller changing the polarization of light received by a respective input of the respective polarization control optical switch and incident on the polarization controller by one of applying voltage thereto and not applying voltage thereto, and

a switching element selectively outputting the polarization changed light to a respective output of the respective polarization control optical switch,

wherein switching light from a respective input of a respective polarization control optical switch in a first column of the matrix to a respective output of a respective polarization control optical switch in a last column of the matrix requires controlling the switching element of only one of the plurality of polarization control optical switches in the matrix.

35. (AS ONCE AMENDED) An apparatus comprising:

an optical space switch comprising:

polarization control optical switches, each having a plurality of inputs and a plurality of outputs and connected together as a matrix defined by columns and rows, each of the polarization control optical switches comprising:

a polarization controller changing the polarization of light received by a respective input of the respective polarization control optical switch and incident on the polarization controller by one of applying voltage thereto and not applying voltage thereto, and

a switching element selectively outputting the polarization changed light to a respective output of the respective polarization control optical switch,

wherein switching light from a respective input of a respective polarization control optical switch in a first column of the matrix to a respective output of a respective polarization control optical switch in a last column of the matrix requires controlling the switching element of only one of the plurality of polarization control optical switches in the matrix.

36. (AS ONCE AMENDED) A polarization control optical space switch comprising: polarization control optical switches, each having a plurality of inputs and a plurality of outputs and connected together as a matrix defined by columns and rows, each of the polarization control optical switches comprising:

a polarization controlling means for changing the polarization of light received by a respective input of the respective polarization control optical switch and incident on the polarization controlling means by one of applying voltage thereto and not applying voltage thereto, and

a switching means for selectively outputting the polarization changed light to a respective output of the respective polarization control optical switch,

wherein switching light from a respective input of a respective polarization control optical switch in a first column of the matrix to a respective output of a respective polarization control optical switch in a last column of the matrix requires controlling the switching means of only one of the plurality of polarization control optical switches in the matrix.

38. (AS ONCE AMENDED) An apparatus comprising:

an optical space switch comprising:

polarization control optical switches, each having a plurality of inputs and a plurality of outputs and connected together as a matrix defined by columns and rows, each of the polarization control optical switches comprising:

a polarization controlling means for changing the polarization of light received by a respective input of the respective polarization control optical switch and incident on the polarization controlling means by one of applying voltage thereto and not applying voltage thereto, and

a switching means for selectively outputting the polarization changed light to a respective output of the respective polarization control optical switch,

wherein switching light from a respective input of a respective polarization control optical switch in a first column of the matrix to a respective output of a respective polarization control